

Remarks

Before entrance of the present Amendment, claims 1-111 were pending in the present application with claims 32-111 being withdrawn from consideration by the examiner. Claims 1-31 currently stand rejected by the Examiner.

Withdrawn claims 32-111 are canceled by the present Amendment. No claims have been amended, and no new claims have been added. Applicant reserves the right to pursue subject matter canceled from the present case in a future application claiming priority to the present application.

Applicant respectfully requests reexamination and reconsideration of the case based on the amended claims. Each of the rejections levied in the Office Action is addressed individually below.

I. Rejection under 35 U.S.C. § 112, second paragraph. The Examiner has rejected claims 9 and 10 under § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner has objected to the term “small molecule” in claim 9 as a relative term which renders the claim indefinite. The Examiner maintains that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention making it impossible to ascertain with reasonable precision when the claim is infringed. Applicant disagrees. The term “small molecule” is a term of art well known to one of ordinary skill in the art. Furthermore, the term is explicitly defined in the specification on page 9, lines 6-17. The definition states that a small molecule typically has a molecular weight of less than about 5000 g/mol. Based on this definition in the specification and the common use of this term in the art, one of ordinary skill in the art would clearly understand the metes and bounds of the term and know whether claim 9 would be infringed. Applicant, therefore, requests that the rejection be removed.

The Examiner has also objected to the term “chemoattractant” in claim 10. Again, the Examiner maintains that the term is indefinite. Applicant disagrees. The term “chemoattractant” is a well known term used in the biological arts. Its definition and metes and bounds are well known to one of ordinary skill in the art. A chemoattractant is an agent that induces chemotaxis in motile cells. For example, a chemoattractant in an inventive composite may help to attract

cells to the composite to induce the formation of new bone and/or the degradation of the composite. Examples of chemoattractants include formyl peptides and cytokines. One of ordinary skill in the art would understand the metes and bounds of this term. Therefore, Applicant requests that the rejection be removed.

II. Rejection under 35 U.S.C. § 103, as being unpatentable over Gunatillake *et al.*, *European Cells and Materials* 2003 and Boyce *et al.*, U.S. Patent 6,123,731. Claims 1-31 have been rejected by the Examiner under § 103 as being unpatentable over Gunatillake *et al.*, *European Cells and Materials* 5:1-16, 2003 and Boyce *et al.*, U.S. Patent 6,123,731. The Examiner states that Gunatillake *et al.* teaches the use of polyurethanes in tissue engineering, and that Boyce *et al.* teaches the combination of bone with bioabsorbable polymers such as polyurethane. The Examiner maintains that the combination of these two reference renders obvious the claimed invention. Applicant disagrees because nothing in either reference teaches the use of a polyurethane made from an optionally hydroxylated biomolecule in a composite as claimed.

Gunatillake *et al.* is nothing more than an article that reviews the many different biodegradable synthetic polymers for use in tissue engineering. Among these polymers is listed polyurethanes. But nowhere does Gunatillake *et al.* mention the use of an optionally hydroxylated biomolecule to form a biodegradable polyurethane polymer.

Boyce *et al.* only mentions polyurethanes in passing (col. 4, lines 39) and does not mention the use of an optionally hydroxylated biomolecule to form a biodegradable polyurethane polymer. Therefore, neither reference teaches the type of polyurethane used in the claimed invention. Without a teaching of this aspect of the claimed invention, even a combination of the two references cannot render the claimed invention obvious. Applicant, therefore, requests that the rejection be removed.

In view of the forgoing arguments, Applicant respectfully submits that the present case is now in condition for allowance. A Notice to that effect is requested.

Please charge any fees that may be required for the processing of this Response, or credit any overpayments, to our Deposit Account No. 03-1721.

Respectfully submitted,

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